JC17 Rec'd PCT/PTO 10 JUN 2005

This listing of claims will replace all prior versions of claims in the application.

Claims 1-142. (cancelled)

143. (new) A compound with the following structure (Formula 1a)

wherein the quinoline moiety may contain more than one nitrogen atom such as, e.g. 2 or 3 nitrogen atoms,

and wherein -A- is a linker, which when the quinoline moiety contains 2 or 3 nitrogen atoms, is selected from the group consisting of

and wherein -A- is a linker, which when the quinoline moiety contains 1 nitrogen atom, is

and Y being CHR7, O, S, NR7;

wherein the linker may be attached via either of the two free bonds to the B group;

and R7 is the same or different and is hydrogen or a straight or branched C₁-C₄ alkyl or alkenyl group; R7 can be linked direct or via hetero atoms to B or the quinoline ring system when chemically feasible;

and X being nitrogen;

B is an aryl or heteroaryl group such as, e.g. phenyl, pyridine, pyrimidine, pyrazine, thiophene;

R1 and R2 are the same or different selected from hydrogen, straight or branched alkyl groups with 1-4 carbon atoms; cycloalkyl groups with 3-7 carbons; alkylcycloalkyl with 4-8 carbons atoms; alkylaryl groups such as benzyl; alkylheteroaryl groups; the alkyl, aryl and heteroaryl groups may be substituted with substituents such as Alk-CONH-, Alk-O-, HO-, NC-, AlkNH-, Alk₂N-, -CONH₂, -CONHAlk, -CONAlk₂, or the aryl and heteroaryl groups fused with moieties such as -O-CH₂-O-, -N=CH-NH-, -O-CH=N-; R2 may be further substituted with one or more R4 groups in any position;

Alk is the same or a different alkyl group;

R4 is the same or different and is hydrogen or a straight or branched C_1 - C_4 alkyl group; and may be substituted with one or two C_1 - C_4 alkyl groups;

R3 may be selected from hydrogen and alkyl groups;

R1, R2, R3 or R4 may optionally be linked to each other, or to the carbon chain linking the two nitrogen atoms, when possible; and O or NR1 may be inserted in the chain or ring in a chemically stable position; R4 may optionally be linked to X;

R5 is hydrogen, halogen atoms, alkyl groups, cycloalkyl groups with 3-7 carbons, alkoxy groups (AlkO-), -CONH₂, -CONHAlk, -CONHAr -CONAlk₂, -NHCO-Alk, -NHCO-Ar, -CO-Alk, -N(CF₃)₂, -SCH₃, partially or fully fluorinated alkyl, alkoxy or thioalkoxy groups such as -CH₂CF₃, -CF₃, -OCF₃, -SCF₃;

optionally, one or more R5 may be present on B; and

n is 2 or 3;

144. (new) A compound according to claim 143, wherein the nitrogen-containing.

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143.

- 145. (new) A compound according to claim 144, wherein Y is oxygen; R3 is methyl; R7 is hydrogen; and A, B, R1, R2, R4, R5, X and n are as defined in claim 143.
- 146. (new) A compound according to claim 143, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has the following structure:

wherein A, R1, R2, R3, R4, X and n are as defined in claim 143.

- 147. (new) A compound according to claim 146, wherein Y is oxygen; R3 is methyl; R7 is hydrogen; and A, B, R1, R2, R4, R5, X and n are as defined in claim 143.
- 148. (new) A compound according to claim 143, wherein the nitrogen-containing chain has the structure:

wherein X, R1, R2, R4 and n are as defined in claim 143.

149. (new) A compound according to claim 143, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143.

150. (new) A compound according to claim 143, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has the following structure:

wherein A, R1, R2, R3, R4, X and n are as defined in claim 143.

151. (new) A compound according to claim 148, wherein the nitrogen-containing chain has the structure:

wherein X, R1, R2 and R4 are as defined in claim 143.

152. (new) A compound according to claim 148, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143.

153. (new) A compound according to claim 148, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143.

154. (new) A compound according to claim 148, wherein the nitrogen-containing chain has the structure:

wherein X, R1 and R4 are as defined in claim 143.

155. (new) A compound according to claim 148, wherein the nitrogen-containing chain has the structure:

$$R4$$
 $R4$
 $R4$
 $R4$
 $R4$

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143.

156. (new) A compound according to claim 148, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143.

157. (new) A compound according to claim 143, wherein the nitrogen-containing chain has the structure:

wherein X, R1 and R4 are as defined in claim 143 and m is 1 or 2.

158. (new) A compound according to claim 143, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143, and m is 1 or 2.

159. (new) A compound according to claim 143, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143, and m is 1 or 2.

160. (new) A compound according to claim 143, wherein the nitrogen-containing chain has the structure:

wherein X, R1, R2, R4 and n are as defined in claim 143.

161. (new) A compound according to claim 143, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143.

162. (new) A compound according to claim 143, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143.

163. (new) A compound according to claim 160, wherein the nitrogen-containing chain has the structure:

wherein X, R1, R2 and R4 are as defined in claim 143.

164. (new) A compound according to claim 160, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143.

165. (new) A compound according to claim 160, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143.

166. (new) A compound according to claim 143, wherein the nitrogen-containing chain has the structure:

wherein X, R1, R2 and R4 are as defined in claim 143 and m is 1 or 2.

167. (new) A compound according to claim 160, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143 and m is 1 or 2.

167. (new) A compound according to claim 160, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143 and m is 1 or 2.

169. (new) A compound according to claim 160, wherein the nitrogen-containing chain has the structure:

wherein X, R1, R2 and R4 are as defined in claim 143.

170. (new) A compound according to claim 160, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143.

171. (new) A compound according to claim 160, wherein the nitrogen-containing chain has the structure:

and the quinoline moiety has one of the following structures:

wherein A, B, R1, R2, R3, R4, R5, R7, Y, X and n are as defined in claim 143.

- 172. (new) A compound according to claim 143, wherein R7 is hydrogen.
- 173. (new) A compound according to claim 143, wherein A is:

wherein R7 is hydrogen.

174. (new) A compound according to claim 143, wherein A has the structure

and the nitrogen-containing chain has the structure:

wherein R7 is hydrogen and R1, R2, R4, X and n are as defined in claim 143.

175. (new) A compound according to claim 143, wherein the compound has one of the following structures:

wherein B, R1, R2, R4, R5 and n are as defined in claim 143.

176. (new) A compound according to claim 143, wherein the compound has the following structure:

wherein B, R1, and R5 are as defined in claim 143.

177. (new) A compound according to claim 143, wherein A has the structure

and the nitrogen-containing chain has the structure:

wherein R7 is hydrogen; Y is oxygen, and R1, R2, R4, Y, X and n are as defined in claim 143.

178. (new) A compound according to claim 143, wherein the compound has one of the following structures:

wherein B, R1, R2, R4, R5, and n are as defined in claim 143.

179. (new) A compound according to claim 143, wherein the compound has one of the following structures:

wherein B, R1, and R5, are as defined in claim 143.

180. (new) A compound according to claim 143, wherein A has the structure

and the nitrogen-containing chain has the structure:

wherein R7 is hydrogen and R1, R2, R4 and n are as defined in claim 143.

181. (new) A compound according to claim 143, wherein the compound has one of the following structures:

wherein B, R1, R2, R4, R5, and n are as defined in claim 143.

182. (new) A compound according to claim 143, wherein the compound has the following structure:

wherein B, R1, R2, and R5 are as defined in claim 143.

183. (new) A compound according to claim 143, wherein A has the structure

and the nitrogen-containing chain has the structure:

wherein R7 is hydrogen; Y is oxygen; and R1, R2, R4, and n are as defined in claim 143.

184. (new) A compound according to claim 143, wherein the compound has one of the following structures:

wherein B, R1, R2, R4, R5, and n are as defined in claim 143.

185. (new) A compound according to claim 143, wherein the compound has one of the following structures:

wherein B, R1, R2, and R5, are as defined in claim 143.

186. (new) A compound according to claim 143, wherein the compound has the following structure:

wherein B is phenyl or pyridine;

R5 is halogen atoms, alkyl groups, partially or fully fluorinated alkyl or alkoxy groups such as - CF₃, -OCF₃;

and R1 and R2 are as defined in claim 143.

- 187. (new) A compound according to claim 143, wherein R3 is methyl.
- 188. (new) A compound according to claim 143, wherein R7 is hydrogen.
- 189. (new) A compound according to claim 143, wherein R4 is hydrogen
- 190. (new) A compound according to claim 143, wherein R1 is hydrogen a lower straight or branched alkyl group with 1-4 carbon atoms or a cycloalkyl group with 3-7 carbon atoms such as, e.g., methyl, ethyl, propyl, isopropyl, cyclopentyl, which may be substituted with OH.
- 191. (new) A compound according to claim 143, wherein R1 is hydrogen, methyl, ethyl, propyl, iso-propyl, or 2-hydroxyethyl.

- 192. (new) A compound according to claim 143, wherein R1 is methyl, ethyl or 2-hydroxyethyl.
 - 193. (new) A compound according to claim 143, wherein Y is oxygen.
 - 194. (new) A compound according to claim 143, wherein B is phenyl or pyridine.
- 195. (new) A compound according to claim 143, wherein R5 is halogen atoms, alkyl groups, -SCH₃, partially or fully fluorinated alkyl, alkoxy or thioalkoxy groups such as -CH₂CF₃, -CF₃, -OCF₃, -SCF₃.
- 196. (new) A compound according to claim 143, wherein the compound is in amorphous or crystalline form.
- 197. (new) A compound according to claim 143, wherein the compound is in racemic or enantiomeric form.
- 198. (new) A compound according to claim 143, wherein the compound is in the form of a physiologically acceptable salt, complex, solvate or prodrug thereof.
 - 199. (new) A compound according to claim 143 for use in medicine.
- 200. (new) A compound according to claim 143 for preventing or treating diseases caused by or involving a melanin-concentrating hormone.
- 201. (new) A compound according to claim 143 for modulating the activity of a MCH receptor.

- 202. (new) A compound according to claim 201 that has antagonistic activity against a MCH receptor.
- 203. (new) A compound according to claim 201 that exhibits agonistic, inverse agonistic or allosteric activity against a MCH receptor.
- 204. (new) A compound according to claim 201, wherein the MCH receptor has at least about 80% such as, e.g. at least about 85% or at least about 90% homology to the amino acid sequence CTLITAMDAN or CTIITSLDTC
- 205. (new) A compound according to claim 201, wherein the MCH receptor comprises the amino acid sequence CTLITAMDAN or CTIITSLDTC.
- 206. (new) A compound according to claim 201, wherein the MCH receptor is a MCH1 or MCH2 receptor.
- 207. (new) A compound according to claim 201, wherein the MCH receptor is a MCH1 receptor.
- 208. (new) A compound according to claim 201, wherein the MCH receptor is a mammalian receptor such as human receptor.
- 209. (new) A cosmetic method for reducing overweight and/or for treating of and/or preventing overweight, bulimia, bulimia nervosa, obesity and/or complications thereto, the method comprising administering to an animal such as, e.g. a human in need thereof, an effective amount of a compound defined in claim 143.

- 210. (new) A method for the treatment and/or prophylaxis of diseases caused by a melanin-concentrating hormone, the method comprising administering to a mammal in need thereof an efficient amount of a compound defined in claim 143.
- 211. (new) A method for the treatment and/or prophylaxis of diseases caused by feeding disorders, the method comprising administering to a mammal in need thereof an efficient amount of a compound defined in claim 143.
- 212. (new) A method for modifying the feeding behaviour of a mammal, the method comprising administering to a mammal in need thereof an efficient amount of a compound defined in claim 143.
 - 213. (new) A method for the reduction of body mass, the method comprising administering to a mammal in need thereof an efficient amount of a compound defined in claim 143.
 - 214. (new) A method for the treatment and/or prophylaxis of Syndrome X (metabolic syndrome) or any combination of obesity, insulin resistance, dyslipidemia, impaired glucose tolerance and hypertension, the method comprising administering to a mammal in need thereof an efficient amount of a compound defined in claim 143.
 - 215. (new) A method for the treatment and/or prophylaxis of Type II diabetes or Non Insulin Dependent Diabetes Mellitus (NIDDM), the method comprising administering to a mammal in need thereof an efficient amount of a compound defined in claim 143.
 - 216. (new) A method for the treatment and/or prophylaxis of bulimia, bulimia nervosa and/or obesity, the method comprising administering to a mammal in need thereof an efficient amount of a compound defined in claim 143.

- 217. (new) A method for the treatment and/or prophylaxis of depression and/or anxiety, the method comprising administering to a mammal in need thereof an efficient amount of a compound defined in claim 143.
- 218. (new) A pharmaceutical composition comprising a compound as defined in claim 143, together with one or more physiologically acceptable excipients.
- 219. (new) A pharmaceutical composition according to claim 218, wherein the compound is present in the form of a physiologically acceptable salt such as a salt formed between the compound and an inorganic acid such as e.g., a hydrochloride, a hydrobromide, a hydroiodide, a nitrate, a nitrite, a H₃PO₃ salt, a H₃PO₄ salt, a H₂SO₃ salt, a sulfate, a H₂SO₅ salt, or a salt formed between the compound and an organic acid such as organic acids like e.g. H₂CO₃, acetic acid, C₂H₅COOH, C₃H₇COOH, C₄H₉COOH, longer saturated or unsaturated fatty acids, (COOH)₂, CH₂(COOH)₂, C₂H₄(COOH)₂, C₃H₆(COOH)₂, C₄H₈(COOH)₂, C₅H₁₀(COOH)₂, fumaric acid, maleic acid, malic acid, lactic acid, citric acid, tartaric acid, ascorbic acid, benzoic acid, salicylic acid, phthalic acid, palmoic acid, trifluoroacetic acid, p-toluenesulfonic acid, methanesulfonic acid.
- 220. (new) A pharmaceutical composition according to claim 218 for enteral and/or parenteral use.
- 221. (new) A pharmaceutical composition according to claim 218 for oral, buccal, rectal, nasal, topical, vaginal or ocular use.
- 222. (new) A pharmaceutical composition according to claim 218 in the form of a solid, semi-solid or fluid composition.

- 223. (new) A pharmaceutical composition according to claim 222 in solid form, wherein the composition is in the form of tablets such as, e.g. conventional tablets, effervescent tablets, coated tablets, melt tablets or sublingual tablets, pellets, powders, granules, or particulate material.
- 224. (new) A pharmaceutical composition according to claim 222 in semi-solid form, wherein the composition is in the form of a chewing gum, an ointment, a cream, a liniment, a paste, a gel or a hydrogel.
- 225. (new) A pharmaceutical composition according to claim 222 in fluid form, wherein the composition is in the form of a solution, an emulsion, a suspension, a dispersion, a liposomal composition, a spray, a mixture, or a syrup.
 - 226. (new) A pharmaceutical composition according to claim 218 comprising a therapeutically effective amount of a compound according to claim 143.
 - 227. (new) A pharmaceutical composition according to claim 226, wherein the amount is from about 0.001 mg to about 1 g such as, e.g. from about 0.005 to about 750 mg, from about 0.01 to about 500 mg, from about 0.05 to about 500 mg, from about 0.1 to about 250 mg, from about 0.1 to about 100 mg or from about 0.5 to about 50 mg.